

## Claims

- [1] An OFDMA-TDMA (Orthogonal Frequency Division Multiplex - Time Division Multiple Access) based wireless Internet terminal comprising:
  - a QoS profile storing information about a QoS policy;
  - a classifier for classifying data packets to be transmitted according to the QoS policy;
  - a first module including a first priority controller that gives priorities to the classified data packets according to the QoS policy;
  - a PDU maker for generating PDUs from the data packets given the priorities;
  - a second priority controller for determining priorities of the PDUs according to a predetermined policy; and
  - a second module arranging the PDUs in an allocated bandwidth to transmit the PDUs.
- [2] The OFDMA-TDMA based wireless Internet terminal as claimed in claim 1, wherein the first module further includes an admission controller that determines admission or discard of the data packets classified by the classifier.
- [3] The OFDMA-TDMA based wireless Internet terminal as claimed in claim 2, wherein the first module further includes a QoS queue storing the data packets classified by the classifier, and a priority queue storing data packets admitted by the admission control based on their priorities.
- [4] The OFDMA-TDMA based wireless Internet terminal as claimed in claim 3, wherein the first module is constructed in a MAC layer by software.
- [5] The OFDMA-TDMA based wireless Internet terminal as claimed in claim 1, wherein the second module includes a sorting queue sequentially storing the PDUs based on priorities assigned by the second priority controller.
- [6] The OFDMA-TDMA based wireless Internet terminal as claimed in claim 5, wherein the PDUs are MAC PDUs, and the second priority controller gives priorities to the MAC PDUs in the order of an ACK packet, a management message packet and a user data packet independently from the QoS profile.
- [7] The OFDMA-TDMA based wireless Internet terminal as claimed in claim 6, wherein the second module is constructed in a MAC layer by hardware.
- [8] A packet processing method in a wireless Internet terminal, comprising:
  - classifying and storing data packets based on a QoS policy;
  - providing first priorities to the data packets classified based on the QoS policy;

storing the data packets given the first priorities in a queue and sequentially outputting the data packets based on their priorities;  
providing second priorities to the data packets based on characteristics of the data packets independently of the QoS policy; and  
sequentially sorting the data packets based on the second priorities to arrange the data packets in an allocated bandwidth.

- [9] The packet processing method as claimed in claim 8, further comprising determining admission or discard of the classified data packets.
- [10] The packet processing method as claimed in claim 9, wherein the classifying and storing data packets, determining admission or discard of the classified data packets and giving first priorities to the classified data packets are executed by software, and the giving second priorities to the data packets and the arranging the data packets are executed by hardware.
- [11] A recording medium storing a program used for a wireless terminal that gives first priorities to data packets based on a QoS policy, gives second priorities to the data packets based on packet information of the data packets given the first priorities and uplink-transmits the data packets, the recording medium comprising:  
storing the QoS policy as a QoS profile;  
classifying and storing the data packets based on the QoS policy;  
determining admission or discard of the classified data packets; and  
providing the first priorities to data packets allowed to be admitted according to the QoS policy.